The Religious Uſe of Botanical Philoſophy.

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SERMON, &c.

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SERMON

PREACHED AT THE

CHURCH OF ST. LEONARD, SHOREDITCH,

On WHITSUN-TUESDAY, JUNE 1, 1784,

On the WISDOM of GOD, as diſplayed in the VEGETABLE CREATION.

BY WILLIAM JONES, M.A.
FELLOW OF THE ROYAL SOCIETY.

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DEDICATION.

TO

SIR JOSEPH BANKS, BART.

PRESIDENT OF THE ROYAL SOCIETY OF LONDON.

SIR,

THE following diſcourſe bears an humble teſtimony to the excellence of BOTANICAL PHILOSOPHY, which has been honoured with much of YOUR attention, and in which YOUR name will always be of the firſt eminence.

I thought myſelf happy in an opportunity of expreſſing on a proper occaſion my regard to a ſcience, in which I have found great delight, from

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the time when I firſt turned my thoughts to the ſtudy of nature: and the return of every ſeaſon ſtill brings ſome new pleaſure with it. But what are our views, Sir, who ſtudy at home, when compared with YOURS? who, not content with the limitations to which we leſſer ſtudents muſt ſubmit, have ſurveyed, ſo far as man can do, the whole vegetable kingdom; that wonderful theatre, in which the divine wiſdom and goodneſs are ſo largely diſplayed: This, Sir, has been your botanical garden! You went abroad with all the botany of your own country, and you added to it that of the terraqueous globe: like a veſſel that carries out the commodities of Britain, and returns laden with the riches of the world.

But there is ſtill a farther treaſure, which may be daily opening itſelf to us, in the various applications of this uſeful and pleaſant ſcience. We are all perſuaded, that much (perhaps the far greater part) of the medicinal uſes of plants, is ſtill hidden from man; being either totally unknown, or loſt and forgotten. I humbly think ſome experimental enquiries might be forwarded with ſucceſs, for obtaining a more certain and extenſive knowledge of the virtue of trees

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and herbs. This would be an honour to botanical philoſophy ; and that no empty honour ; it would be highly beneficial to mankind.

That the ſcience of nature, and all the uſeful learning that relates to it, may be promoted by your example and labours, and encouraged by your patronage and protection in the learned ſociety over which you preſide, is the fervent wiſh of,

SIR,

Your moſt obedient,

and devoted

humble Servant,

NAYLAND,
AUG. 2, 1784.

WILLIAM JONES.

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SERMON, &c.

And the earth brought forth graſs, and herb yielding ſeed after his kind, and the tree yielding fruit, whoſe ſeed was in itſelf; and God ſaw that it was good. GEN. i. 12.

IF an author, who ſhould undertake to explain the proportion of architecture, were to trouble us with a long preface, to prove that every houſe we ſee, muſt have been the work of ſome man, becauſe no houſe could poſſibly build itſelf, or riſe into form by accident; I preſume, we ſhould all be of opinion, that he might have ſpared this part of his labour. It ſeems equally ſuperfluous to inſiſt, that the ſtructure of nature could not raiſe itſelf; the caſes being exactly parallel, and both ſelf-evident to common ſenſe. There is a ſort of ſenſe, which pretends to diſcover, not only that the argument is neceſſary, but that the proof is deficient. We truſt, however, that ſuch ſenſe neither is, nor ever will be common. If there really be ſuch a thing as ſpeculative or philoſophical atheiſm, that doctrine muſt

be the individual point, in which the affectation of wiſdom meets the extremity of folly; and it would be loſs of time to reaſon with it. We therefore take it upon the authority of the text, that herbs, trees, fruits and ſeeds, are the work of God; and the preſent occaſion requires us to conſider how, and in what reſpects, this work is *good*, and diſplays the wiſdom of the great Creator.

The *goodneſs* aſcribed to this part of the creation is evidently not moral but natural: it means, that the ſeveral articles of the vegetable kingdom have that ſort of goodneſs of which they are capable; that they are beautiful and perfect in their kinds; wonderful in their growth; ſufficient in their powers and properties; and beneficial in their uſes. In theſe capacities we are to conſider them; and to obſerve how the wiſdom of the Creator is manifeſted,

Firſt, in the form and ſtructure of vegetables.

Secondly, in the manner of their growth.

Thirdly, in their natural uſes, for meat and medicine.

Fourthly, in their moral uſes; for the advancement of human prudence and religious faith.

Herbs and flowers may be regarded by ſome perſons as objects of inferior conſideration in philoſophy; but every thing muſt be great which hath God for its author. To him all the parts of nature are equally related. The flowers of the earth can raiſe

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our thoughts up to the Creator of the world as effectually as the ſtars of heaven: and till we make this uſe of both, we cannot be ſaid to think properly of either. The contemplation of nature ſhould always be ſeaſoned with a mixture of devotion; the higheſt faculty of the human mind; by which alone contemplation is improved, and dignified, and directed to its proper object. To join theſe together is the deſign of our preſent meeting; and when they are joined, may they never more be put aſunder.

In the form and ſtructure of plants, with the proviſion for their growth and increaſe, there is a ſtore of matter which would more than fill a philoſophical treatiſe: I muſt therefore content myſelf with tracing ſome of the outlines of ſo large a ſubject.

The firſt thing which engages the curioſity of man, and tempts him to beſtow ſo much of his labour and attention upon this part of the creation, is the beautiful form and ſplendid attire of plants. They who practiſe this labour know how delightful it is. It ſeems to reſtore man in his fallen ſtate to a participation of that felicity, which he enjoyed while innocent in Paradiſe.

When we caſt our eyes upon this part of nature, it is firſt obſervable, that herbs and trees compoſe a ſcene ſo agreeable to the ſight, becauſe they are inveſted with that green colour, which being exactly in the middle of the ſpectrum of the coloured rays of light, is tempered to a mildneſs which the eye can bear. The other brighter and more ſimple colours are ſparingly beſtowed on the flowers of plants; and which, if diffuſed over all their parts, would have been too glaring, and conſe-

quently offenſive. The ſmaller and more elegant parts are adorned with that brightneſs, which attracts the admiration without endangering the ſenſe.

But while the eye is delighted with the colouring of a flower, the reaſon may be ſtill more engaged with the natural uſe and deſign of a flower in the œconomy of vegetation. The rudiment of the fruit, when young and tender, requires ſome covering to protect it; and accordingly, the flower-leaves ſurround the ſeat of fructification; when the ſun is warm, they are expanded by its rays, to give the infant-fruit the benefit of the heat; to forward its growth when the ſun ſets, and the cold of the evening prevails, the flower-leaves naturally cloſe, that the air of the night may not injure the ſeed-veſſel. As the fructification advances, and the changes of the air are no longer hurtful, the flower-leaves have anſwered their end, and ſo they wither and fall away. How elegant therefore, as well as appoſite, is that alluſion in the goſpel; *I ſay unto you that Solomon, in all his glory, was not arrayed like one of theſe:** for the flower, which is the glory of the lily and other plants, is literally and phyſically a raiment for the clothing of the ſeed-veſſel. And a raiment it is, whoſe texture ſurpaſſes all the laboured productions of art for the clothing of an eaſtern monarch. The fineſt works of the loom and the needle, if examined with a microſcope, appear ſo rude and coarſe, that a ſavage might be aſhamed to wear them: but when the work of God in a flower is brought to the ſame teſt, we ſee how fibres, too minute for the naked eye, are compoſed of others ſtill more minute; and they of others; till the primordial threads or firſt principles of the texture,

* Matt. vi. 29.

ture, are utterly undiſcernible: while the whole ſubſtance preſents a celeſtial radiance in its colouring, with a richneſs ſuperior to ſilver and gold; as if it were intended for the clothing of an angel. The whole creation does not afford a more ſplendid object for minute examination than the leaves and filaments of flowers; even of ſome flowers which look obſcure, and promiſe little or nothing to the naked eye.

But beſides this richneſs of ſubſtance and colour, there is an elegance of *deſign* in the whole form and diſpoſition of a plant, which human artiſts, in ornamental works, are always ſtudious to imitate. Their leaves, and branches and flowers, are thrown about with that eaſe, and turned into beautiful lines, ſo as to charm the eye with a variety of flexure, and convince us that all the excellence of art muſt take its pattern from nature.

The parts generally obſervable in plants, are a root, a ſtalk, branches, leaves, flowers, fruit and ſeeds, ſucceeding each other in their order, and all ſeeming neceſſary to one another. But under the direction of divine wiſdom, vegetable life is carried on in every poſſible form, and the end of fructification is attained, while the means ſeem to be wanting: as if Providence meant to ſhew us, that it is not confined to any particular means; and that the work of God in this reſpect eſſentially differs from the work of man. The *Capillary* Plants, or Ferns, have neither ſtalks, nor branches, nor flowers, but conſiſt of ſingle leaves on their pedicles, with ſeeds upon the backs of them. The flower of the Carline Thiſtle ſits upon the ground without a ſtalk; while the Euphorbium, or Torch-thiſtle, has nothing but a ſtalk, like the ſtaff of a ſpear. The Melon-thiſtle is all fruit; the Opuntia, or Indian fig, all leaf; the Jeſſamine has a flower without a ſeed;

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the Fig-tree a fruit without a flower. The *Tuber-terræ*, or Truffle, has neither leaf, ſtem, branch, flower nor ſeed; nothing but a globular root, which thrives under ground, and does not appear to be fed by fibres like other roots: yet it increaſes and multiplies.

It is a general rule in nature, that plants which have the ſame characters have like qualities; but where this rule would teach us to expect a poiſon, we find a plant with an agreeable odour and wholeſome nouriſhment; as in the *Solanum Eſculentum*, which is of a deadly race, with all the external characters of a night-ſhade. Are we not hence to learn, that quality does not ariſe from configuration, or from any neceſſity of nature; but follows the will and wiſdom of the Creator; who to every plant, as to every man, *divideth ſeverally as he will.*

It ſeems eſſential to trees, that they ſhould be fixed in the earth, and draw their nouriſhment from it; but ſome will have no communication with the earth; affixing themſelves in a ſtrange manner to the wood of other trees, and ſubſiſting upon their juices: yet preſerving their own peculiar nature and complexion.

Flowers are commonly expanded by the heat of the ſun; but ſome are opened in the evening when others are cloſed; and break forth at midnight; particularly one, which is the glory of the vegetable creation; like the nightingale, which delights the ear of man, and diſplays its ſkill without a rival, while other birds are ſilent and at reſt.

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When we ſurvey the plants of the ſea, how diſcernible is that wiſdom which hath provided for their ſubſiſtence and ſafety in that element! Such as have broad leaves, and would be forced from their ſtation by tides or ſtorms, if their roots were fixed into an earthy bottom, are faſtened by the root to weighty ſtones and pebbles; where inſtead of being driven about at random by the agitations of the water, they lie ſafe at anchor. That they may not be bruiſed by lying proſtrate on the ground they are rendered powerfully buoyant, and kept in an erect poſition, by means of large veſicles of air, variouſly diſpoſed about their leaves or their ſtalks, as the difference of their form and ſtructure may require. A ſimilar proviſion for their preſervation is obſervable in many of the plants which grow upon the land. Such as are tender and flexible, and apt to trail upon the ground, are furniſhed with ſpiral tendrils, or other like means, by which they lay hold of ſuch other plants as are firm and upright. What an uſeful leſſon is this to human ſociety! where, according to the analogy of nature, the ſtrong ought to ſupport the weak, and the defenceleſs ſhould reſt ſecurely upon the powerful. How different a place would the world be, if this example were religiouſly followed!

And now if there are ſo many effects of the divine wiſdom viſible to us who are confined in a climate remote from the ſun; what opportunities muſt they have, what wonders of the Lord muſt they ſee, *who go down to the ſea in ſhips*, and make their obſervations in happier regions; where the ſun, the ſoil, the air, all things being different, vegetation is on a much larger ſcale, and preſents many grand and glorious objects which can never come to our ſight.

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In ſpeaking of the growth of plants, which is the ſecond thing to be conſidered, I muſt forbear to attempt a theory. The firſt particular which meets us, is that ſpoken of in the text, that herbs and trees carry their *ſeeds in themſelves:* from whence it ſeems deducible, that the primæval tree or plant, which was contemporary with the firſt father of mankind, included all the trees that ſhould proceed from it to the end of time: ſo that the ſeed which is growing into an herb at this day, is but an evolution of ſomething which ſubſiſted in the firſt plant at the creation. How to get clear of this conſequence we do not ſee; and to purſue it we are not able: our imagination is bewildered and loſt in the idea of ſuch a ſucceſſion; the rudiments of a future foreſt included in a ſingle acorn!

It is not ſo far beyond us to obſerve, how the elements in their ſeveral capacities are made ſubſervient to the life and increaſe of plants. The ſoil on which they grow contains a mixture of principles, wiſely tempered together, which ſupply vegetables with matter for their nouriſhment; and their root with its fibres and lacteals, which takes in this nouriſhment, anſwers the ſame purpoſe as the ſtomach in animals. Water is the vehicle which conveys this nouriſhment into their veſſels; while the ſun and air, expanding and contracting, keep up an oſcillatory motion analagous to that of reſpiration.

It is now allowed, that there is both a vital circulation of the juices in vegetables, and a large perſpiration from their pores; which latter is become a ſubject of great curioſity and importance, from the ſucceſsful labours of thoſe who have cultivated this part of natural philoſophy. The circulation in plants is ſtrong in the ſpring, and languid in the winter; in ſome it is ſo forcible

ble and abundant, that if their veſſels are opened at an improper ſeaſon, they will bleed to death, as when an artery is divided in the human body. If the finer ſpirit evaporates from a plant, and it has no freſh ſupply, it becomes inſtantly flaccid and fading, as an animal body dies with the departure of its breath.

The proceſs of vegetation is forwarded in a wonderful manner by the viciſſitude of day and night, and the changes of the weather. The heat of the ſun raiſes a moiſt elaſtic vapour, which fills and expands certain veſſels in plants, and ſo gradually enlarges their bulk; while the colder air of the night condenſes and digeſts the matter which has been raiſed, and ſo confirms the work of the day. We complain of cold blaſts and clouded ſkies, by the intervention of which, vegetation rapidly advancing is ſuddenly ſtopped and ſeems ſtationary: but this may be wiſely ordained by Providence: the growth of herbs may be too haſty; they are weak in ſubſtance, if they are drawn forward too faſt. A cold ſeaſon prevents this too haſty growth; as in the moral world ſome ſeaſonable diſappointment may give a ſalutary check to an aſpiring mind, and eſtabliſh it in wiſdom and patience. Even the rougheſt motions of the elements have their uſe. Winds and ſtorms, which agitate the bodies of trees and herbs, looſen the earth about their roots, and make way for their fibres to multiply, and to ſtrike more kindly into the ſoil, to find new nouriſhment. Thus is nature more effectually progreſſive when it ſeems to be ſtationary or even retrograde; and all things work together for good; which they could never do but under the foreſight and direction of an all-wiſe Providence.

But above all, the ſhowers of heaven, concurring with the ſun, promote the work of vegetation. They keep the matter of the ſoil ſoluble, and conſequently moveable; for ſalts cannot act but in a ſtate of ſolution; they furniſh matter for an expanſive vapour, which acts internally and externally: and, what is but lately underſtood, though equally worthy of admiration, the rain brings down with it an invigorating etherial ſpirit from the clouds, which gives it an efficacy far beyond all the waterings which human labour can adminiſter. It is here in the kingdom of nature as in the kingdom of grace; nothing can ſucceed without a bleſſing from heaven: *Every good gift and every perfect gift is from above, and cometh down from the Father of Lights**. How commonly do we ſee, that ſome ſeeds which lie ſtill in the ground, and cannot be made to ſtir by all the waterings of art, will ſuddenly ſtart up to life as ſoon as they are touched by a watering from the heavens. Such is the difference between the gifts of God and the gifts of man.

But, thirdly, the goodneſs of God, as well as his power and wiſdom, is diſplayed in the uſes of plants: and it is rather a matter of duty than of curioſity to conſider them attentively. It is the wiſdom of man to learn the will of God from the ſtate of nature, as well as from the pages of revelation; and it is his happineſs to follow it when known. According to the ſtate of nature a preference ſeems to be given to vegetable diet. For the uſeful and harmleſs cattle, which either feed man with their milk, or aſſiſt him in his labours, nothing is provided but a vegetable or farinaceous diet. Animal food is proper to wild beaſts of fierce and ſavage natures; and the man who abuſes it, is too nearly allied to that claſs of animals. The beaſts diſtinguiſhed

* James i. 17.

tinguiſhed by the Levitical law as proper and wholeſome to man are very few. The inhabitants of the waters, which ſupply a more temperate diet, are adminiſtered to us in much greater variety: but the luxuriance of nature is found in the vegetable kingdom; where the roots, leaves, fruits, and ſeeds of plants, afford all that is moſt tempting to the eye, grateful to the taſte, and deſireable to the appetite. The ſweeteſt food in the world, which is honey, is a compoſition elaborated by the bee from the flowers of vegetables. The emblematical horn of plenty is not ſtored with beaſts, fowls, and fiſhes, but with herbs and fruits for the ſuſtenance and delight of man. The efficacy of a vegetable diet, for preſerving the body in health, and the mind in a clear and temperate ſtate, hath in all ages been confirmed by the experience of the wiſe and good. The greateſt inſtances of longevity have been found among the virtuous and the recluſe, who feaſted on the herbs and roots which their own hands had cultivated,

Of the goodneſs and wiſdom of God we have farther evidence in the medicinal herbs. If men obtain the reputation of wiſdom by a judicious application of them to the cure of diſeaſes; what muſt that original wiſdom be, which gave them their forms and their faculties? *The Lord*, ſaith the ſon of Sirach, *hath created medicines out of the earth, and he that is wiſe will not deſpiſe them** When he conſiders who is the anthor of them, he will be perſuaded, that, if underſtood, they muſt be found more ſafe in their uſe, than the preparations of human art, he will therefore reſpect their virtues, and give them the preference which is due to them. There is certainly a momentum in mineral preparations, which produces ſudden and

* Eccleſ. xxxviii. 4.

great effects; but their power approaches too near to violence; while the vegetable medicines, ordained to be ſuch by the Creator, are more congenial to the human conſtitution; and thus a reaſonable alliance is preſerved between the medicine of man and the diet of man: but we never eat minerals, though we uſe them in medicine; often with ſome good, but alſo with the danger of ſome bad effect. The mineral materials of a volcano will warm us, as the fuel of any other fire; but at the ſame time they may ſuffocate, or ſend down ruin upon our heads.

What poſſible modification of minerals can chemiſtry exhibit, which will quiet a diſtempered agitation of the nerves, and leſſen the ſenſation of pain, which would otherwiſe be inſupportable? But this deſirable effect is wonderfully produced by the medicinal juice of the poppy. The learned know that there are ſeveral effects in medicine, which are never to be obtained but from vegetables; and ſo perſuaded are they of a ſpecific ſalutary power in them, that they apply for help even to ſuch plants as are poiſonous. That the poiſonous plants have their uſe, we muſt preſume, becauſe they have the ſame divine author with the reſt. *Every creature of God is good* in its proper capacity; but if we miſtake its capacity we ſhall abuſe it. Poiſonous herbs, from their great power, may do ſervice internally, in very ſmall quantities: but we ſhould rather ſuppoſe, from what we have heard and ſeen, that they were intended chiefly for external application; in which they can perform wonders; and medicine might perhaps be improved if more experiments were made in this way. But, it is not my province to enlarge here, and I have nothing but a good meaning to plead for proceeding thus far.

It is now to be obſerved, laſtly, that the ſame wiſdom which ordained the vegetable creation for the natural uſe of feeding and healing the body, hath applied it alſo to a moral or intellectual uſe, for the enlarging of our ideas, and the enlightening of our underſtandings. It joins its voice in the univerſal chorus of all created things, and to the ear of reaſon celebrates the wiſdom of the Almighty Creator. As *the heavens* from day unto day, and from night unto night, *declare the glory of God*, ſo do the productions of the earth, all trees and herbs, in their places and ſeaſons, ſpeak the ſame language; from the climates of the north to the torrid regions of the ſouth, and from the winter to the ſpring and the harveſt.

The holy ſcripture hath many wiſe, and ſome beautiful, alluſions to the vegetable creation, for moral and religious inſtruction. The moſt ancient piece of this ſort is the parable of *Jotham* in the book of *Judges*; where the diſpoſitions and humours of men, and their effects in ſociety, are illuſtrated by the different natures of trees. On occaſion of *Abimelech*'s treachery, *Jotham* tells the people, under the form of a fable, that the trees went forth to anoint them a king; and when all the good and honourable, as the olive, the fig-tree, and the vine, declined the trouble of ruling in ſociety, the bramble offered his ſervices, and invited them to *truſt* in his *ſhadow**. Thus it had happened in the caſe of *Abimelech*: and doth not experience ſhew us at this day, that the moral is ſtill good? that the worſt, and the moſt worthleſs, are always the moſt forward to thruſt themſelves into power, and promiſe great things; how ſafe and happy we ſhould be under their ſhadow!

* See Judges ix. 8, &c.

dow! As if brambles, of a nature to tear the ſkin, and draw blood from every part of the body, and fit for nothing but to be burned out of the way, could form an agreeable ſhade for the people to ſit under! The good and the virtuous, who are fruitful and happy in themſelves, would be deprived of their internal comforts by the hurry and danger which attend the poſſeſſion of power: but bad men, who have no ſource of content and enjoyment within themſelves, are always ſo forward to ſeek it without themſelves, and would turn the world upſide down, or tear its inhabitants to pieces, to ſatisfy their own ambition. When circumſtances conſpire to bring thoſe into action who are moſt worthy of power, then the people ſit *under the vine*, and *under the fig-tree*, in the enjoyment of peace and plenty.

Our bleſſed Saviour, with a like alluſion, hath referred us to the natural ſtate and condition of plants and flowers; thence to learn the unprofitableneſs of that anxiety and diſtruſt, with which we ſeek after the things of this world. *Conſider the lilies, how they grow—If God ſo clothe the graſs of the field, ſhall he not much more clothe you?** As if he had ſaid; "You admire the beautiful clothing of a flower; and indeed it is worthy of all admiration: the God on whom *you* depend, is the author of its wonderful contexture; whence you ought to learn, that if he hath beſtowed this rich attire upon the inferior part of the creation, the graſs of the field, ſo fading and tranſient, he will never leave you unprovided who are made for eternity.

The

* Matt. vi. 28.

The accidents to which plants are expoſed in their growth afford matter for the beautiful and inſtructive parable of the ſower; which conveys as much in a few plain words as a volume could do in any other form*. The ſeed of God's word, when it is ſown by a preacher, may fall into an honeſt and good heart, as the ſeed of the ſower into a happy fruitful ſoil; or it may light among the thorns of worldly cares, and the rank weeds of worldly pleaſures, which ſpringing up with it, will choke it and render it unfruitful: or it may fall into an haſty impatient mind, like ſeed upon a ſhallow rocky ſoil, where it has no depth of earth, and ſo cannot endure when the heat of the ſun dries it. Other minds are open to the ways of the world in public or faſhionable life, and unguarded againſt the dangers of ſin; ſo are expoſed to the depredations of evil ſpirits, which rob them of what they had heard; as birds of the air pick up without fear or moleſtation, the ſeeds which are ſcattered by the ſide of a public road.

The tranſient nature of plants and flowers has given occaſion to many ſtriking repreſentations of the brevity and vanity of this mortal life. "As the leaves wither and fall away from the trees and others ſucceed, ſo," ſaith an ancient poet, "are the generations of men†."

How

* Matt. xiii. 3, &c.

† Οιη περ φυλλων γενεη, τοιηδε και ανδρων.
Φυλλα τα μεν τ' ανεμος χαμαδις χεει
Hom. Il. ζ. 146.

Like leaves on trees the race of man is found,
Now green in youth, now with'ring on the ground.
Pope's Hom. b. 6. l. 181.

How ſublime and affecting is that reflexion in the book of Job— "Man that is born of a woman hath but a ſhort time to live, and is full of miſery: he cometh up like a flower, and is cut down*." In the ſame figurative language doth the Pſalmiſt ſpeak of the flouriſhing ſtate of man in youth, and his decay in the time of age; "In the morning they are like the graſs which groweth up; in the morning it flouriſheth and groweth up; in the evening it is cut down and withered." To cure us of our confidence in the wealth and proſperity of this world, and make way for the ſerious temper of the goſpel, nothing can be more expreſſive and rhetorical than that ſentence of St. James; "Let the brother of low degree rejoice in that he is exalted; but the rich in that he is made low; becauſe as the flower of the graſs he ſhall paſs away: for the ſun is no ſooner riſen with a burning heat, but it withereth the graſs, and the flower thereof falleth, and the grace of the faſhion of it periſheth: ſo ſhall the rich man fade away in his ways:" that is, he ſhall decay in his proſperity, as the flower fades the ſooner for the enjoyment of the ſun-ſhine.

The reviving of ſeeds and roots buried in the earth, though ſo common a fact, is yet ſo wonderful, that it is more than a figure, it is a pledge and aſſurance that the dead ſhall riſe again. In every ſpring nature preſents us with a general reſurrection in the vegetable world, after a temporary death and burial in the winter. The root that lies dormant under the ground *is a priſoner of hope*, and waits for the return of the vernal ſun. If it could ſpeak, it might repeat (and to the ear of faith it does repeat) thoſe words of the apoſtle; *O grave where is thy victory?*

So

* Job xiv. 2.

So plainly doth vegetable nature preach this doctrine of the reſurrection, that the man is ſuppoſed to be ſenſeleſs, who does not make his uſe of it—*thou fool, it is not quickned except it die.*

I would now only obſerve, after what hath been ſaid, that a right uſe of our preſent ſubject in all its parts, muſt contribute to the dignity and to the happineſs of man. How innocently, and how pleaſantly is he entertained, who in cultivating the various productions of the earth, hath the elements working with him and aſſiſting him, to perfect his flowers and fruits, and raiſe a Paradiſe around him! What a rational and noble employment it is, to trace the effects of divine wiſdom in a ſurvey of the vegetable kingdom; in the beautiful forms of plants, their endleſs variety, the configuration of their organs, the diſtinction of their characters; the places of their inhabitation, by land, by ſea, in rivers and in lakes, on rocks and mountains, in the fields, the paſtures, and the woods: with their ſucceſſions from the ſpring to the ſummer, from the ſummer to the autumn; their appearances by day and by night.

How proper is it to uſe them for health and for temperance, as the wiſe have done, and as the Creator, ever mindful of the *ſum* of our happineſs hath appointed. What a reſpectable benefactor is he to mankind, who diſcovers their virtues in medicine, and applies them to the relief of the miſerable; an office ever grateful to a benevolent mind.

But happieſt of all is he, who having cultivated herbs and trees, and ſtudied their virtues, and applied them for his own

and for the common benefit, riſes from thence to a contemplation of the great Parent of good, whom he ſees and adores in theſe his glorious works. The world cannot ſhew us a more exalted character than that of a truely religious philoſopher, who delights to turn all things to the glory of God; who from the objects of his ſight derives improvement to his mind, and in the glaſs of things temporal ſees the image of things eternal. Let a man have all the world can give him; he is ſtill miſerable if he has a groveling, unlettered, indevout mind. Let him have his gardens, his fields, his woods and his lawns, for grandeur, ornament, plenty and gratification; while at the ſame time God is not in all his thoughts. And let another have neither field nor garden: let him only look at nature with an enlightened mind; a mind which can ſee and adore the Creator in his works; can conſider them as demonſtrations of his power, his wiſdom, his goodneſs, his truth: this man is *greater*, as well as happier, in his poverty, than the other in his riches. The one is but little higher than a beaſt, the other but little lower than an angel.

We ought therefore to praiſe thoſe who in their life-time made this uſe of the natural world, and gratefully to remember that piety, which directed our minds to an annual commemoration of God's wiſdom in the works of the vegetable creation: a great ſubject, in diſcourſing on which, I have only ſcattered ſome ſeeds, to be opened and perfected by your future meditation; in which may the grace of God aſſiſt us all, through Jeſus Chriſt, our Lord, &c.

FINIS.